The Rise of Environmental Impact Reporting in Agrifood Systems

Koen Deconinck

A new trend is emerging as food supply chains move toward greater reporting of quantified environmental impacts, such as carbon footprints. The last few years have witnessed rapid developments, with a large number of both public and private initiatives underway. This "fast and furious" trend (Deconinck, Jansen, and Barisone 2023) could provide better information to help reduce environmental pressures in the agrifood sector. At the same time, different methodologies and reporting requirements could lead to a fragmented landscape, and there is also a risk that small producers, especially in the Global South, will be disproportionately affected, as they are least likely to be able to provide the necessary reporting data.

The European Union's Corporate Sustainability Reporting Directive (CSRD), which went into effect in January 2023, is one example of this new reporting trend. The CSRD requires all large firms, and all firms on the stock market in the European Union, to report on a range of sustainability indicators (EU 2022). So-called "Scope 3" greenhouse gas emissions are one required indicator: while Scope 1 emissions encompass those from a firm's own activities and Scope 2 emissions result from a firm's purchased energy, Scope 3 emissions cover emissions from the firm's "upstream" and "downstream" activities, such as emissions embedded in purchased goods and services. For example, if the production of cocoa for a chocolate bar sold in a supermarket in France or Spain involved deforestation, the emissions resulting from land use change would be part of the Scope 3 emissions for the supermarket, the candy manufacturer, and the commodity traders. The European Union's rules do not require firms to specify the Scope 3 emissions for every product in detail, but it is clear that firms will begin to pay greater attention to the upstream emissions of products they purchase and will likely ask for additional information from their suppliers (OECD and WEF 2023).

In addition to the example of the CSRD, many firms are voluntarily reporting their emissions through the CDP platform, a global disclosure system for various actors, including investors and companies, to manage their environmental impacts (CDP 2024a). In 2023, more than 23,000 firms worldwide engaged in this voluntary reporting, an increase of 24 percent compared with the previous year (CDP 2024b). Many firms are also setting voluntary targets, including for their Scope 3 emissions, through the Science-Based Targets initiative, which provides companies with a path to reduce emissions in line with the Paris Agreement on climate change (Science-Based Targets 2024a). Last year, the number of firms with validated targets doubled to 4,200 (Science-Based Targets 2024b), a figure that includes most of the world's leading retailers.

The rise in environmental impact reporting is underpinned by growing demand from consumers and civil society actors, as well as investors. Consumers are increasingly interested in knowing the environmental impact of their food products, including climate impacts. In response, many labeling schemes have been created to communicate quantified environmental impacts across several dimensions, such as water, climate, and biodiversity. These new schemes differ from traditional sustainability labels (such as organic and Fairtrade, among others), as they are based on a quantification of environmental impacts.

Several developments are also making it easier to quantify and communicate impacts. These include the development of clear reporting standards (such as the ISO standards on life-cycle assessment [ISO 2006a; ISO 2006b] or the Greenhouse Gas Protocol standards on emissions reporting [WBCSD and WRI 2004]), the availability of farm-level tools to calculate impacts, and the emergence of platforms to enable sharing these data between supply chain actors. Another overarching trend is the growing use of a "supply chain lens" to address global environmental issues and resulting improvements in supply chain traceability.

Greater environmental impact reporting could provide powerful information to help reduce the environmental footprint of global agrifood systems. It is useful to distinguish three levers that can be unlocked with better data:

- **A shift from food products with higher average environmental impacts to those with lower average impacts.** For example, the available evidence shows that products such as beef, lamb, or cheese have

higher average emissions than those such as poultry or pork. In turn, poultry and pork have higher emissions than plant-based products.

- **A shift within each product category from producers with higher emissions to those with lower emissions.** The available evidence shows enormous heterogeneity around the average, meaning that traders, manufacturers, and retailers—as well as consumers—might increasingly shift toward suppliers who can demonstrate lower environmental impacts.
- **The adoption of techniques and practices that lower emissions.** Farmers and other supply chain actors can generally take action to reduce their environmental impacts. Detailed calculation tools could help them identify the best approach and demonstrate this to buyers.

However, the same trend of environmental impact reporting also poses important risks: for example, it is possible that instead of converging, different initiatives and requirements will instead create a fragmented landscape, leading to confusion and high transaction costs. Even if this hurdle can be overcome, another risk is that the trend will disproportionately affect producers in low- and middle-income countries. On average, these producers often have higher emissions intensities, and they may have more difficulty in demonstrating their environmental footprint. Much of the current science on measuring environmental impacts was developed in high-income countries, while detailed field studies to calibrate quantification tools are scarcer in low- and middle-income countries.

The trend could have far-reaching consequences for African agrifood exports if, for example, firms in high-income markets start asking African suppliers for quantified environmental impacts. It is unclear whether producers with lower environmental impacts would be able to reap a price premium, or whether producers with a worse footprint would be excluded from supply chains. Other open questions include the extent to which downstream supply chain actors would be involved in helping to reduce emissions from their supplier base or to which global trade flows might be reoriented in response to this new trend in impact reporting.